

HOW TO GROW PRODUCTIVE PULLETS



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LISTEN TO THE

TIPS
ON POULTRY
PROFITS

MAN ON THE FARM

CONTESTS
AND
PRIZES!

FUN
FOR ALL!

EACH WEEK
OVER YOUR FAVORITE STATION

The Man on the Farm

The MAN ON THE FARM starts its ninth year on the air in February. Join the thousands who listen regularly to this popular farm radio show. Chuck Acree with his cross questions and crooked answers provides plenty of laughs. Reggie Cross and his Ful-O-Pep Harmonizers play familiar tunes which all of us enjoy. And each week the broadcast brings you the latest information on poultry practices which will help you increase the profits from the flock. You will find it a half hour loaded with fun and profit.

The MAN ON THE FARM may be heard on any of the following stations:

WLS	Chicago, Ill.	12:00 to 12:30 pm	KMOX	St. Louis, Mo.	12:30 to 1:00 pm
WAPI	Birmingham, Ala. ...	12:00 to 12:30 pm	KWTO	Springfield, Mo.	1:00 to 1:30 pm
KARK	Little Rock, Ark.	12:00 to 12:30 pm	WOR	New York, N. Y.	1:00 to 1:30 pm
KOA	Denver, Colo.	12:00 to 12:30 pm	WHAM	Rochester, N. Y.	12:30 to 1:00 pm
WRUF	Gainesville, Fla.	11:30 to 12:00 pm	WSYR	Syracuse, N. Y.	12:35 to 1:05 pm
WJAX	Jacksonville, Fla. ...	12:15 to 12:45 pm	WTRY	Troy, N. Y.	12:30 to 1:00 pm
WIOD	Miami, Fla.	12:00 to 12:30 pm	WWNY	Watertown, N. Y.	5:30 to 6:00 pm
WFLA	Tampa, Fla.	12:15 to 12:45 pm	WBT	Charlotte, N. C.	12:35 to 1:00 pm
WSB	Atlanta, Ga.	12:30 to 1:00 pm	WLW	Cincinnati, Ohio	12:00 to 12:30 pm
WDZ	Tuscola, Ill.	12:30 to 1:00 pm	WKY	Oklahoma City, Okla. ...	12:00 to 12:30 pm
WHO	Des Moines, Ia.	1:00 to 1:30 pm	KTUL	Tulsa, Okla.	12:30 to 1:00 pm
KMA	Shenandoah, Ia.	12:15 to 12:45 pm	KDKA	Pittsburgh, Pa.	12:30 to 1:00 pm
WIBW	Topeka, Kans.	6:00 to 6:30 pm	WIS	Columbia, S. C.	1:00 to 1:30 pm
WAVE	Louisville, Ky.	1:00 to 1:30 pm	WNOX	Knoxville, Tenn.	11:30 to 12:00 N
WWL	New Orleans, La.	12:00 to 12:30 pm	WMC	Memphis, Tenn.	12:00 to 12:30 pm
KWKH	Shreveport, La.	1:00 to 1:30 pm	WSM	Nashville, Tenn.	12:00 to 12:30 pm
WBAL	Baltimore, Md.	12:15 to 12:45 pm	KGNC	Amarillo, Texas	11:30 to 12:00 N
WBZ } WBZA }	Boston-Springfield, Mass.	12:15 to 12:45 pm	WFAA } WBAP }	Dallas-Ft. Worth, Texas	1:00 to 1:30 pm
WJR	Detroit, Mich.	5:30 to 6:00 pm	KPRC	Houston, Texas	1:00 to 1:30 pm
WCCO	Minneapolis, Minn. ...	1:00 to 1:30 pm	WOAI	San Antonio, Texas ...	1:15 to 1:45 pm
WJDX	Jackson, Miss.	12:00 to 12:30 pm	WSVA	Harrisonburg, Va. ...	12:00 to 12:30 pm
KFEQ	St. Joseph, Mo.	6:00 to 6:30 pm	WRVA	Richmond, Va.	12:30 to 1:00 pm



High Pen at the Hunterdon Contest, Raised by J. J. Warren.

Grow Sound Pullets

WELL-RAISED, high producing pullets are the foundation of profitable commercial and breeding flocks alike.

If you are primarily producing commercial eggs, we would strongly recommend that you make your plans now for raising enough pullets this spring so you can replace all the laying hens with pullets next fall. A pullet flock will commonly produce at least fifty more eggs per bird plus living better than old hens. It is only the breeder who is trapnesting and pedigree breeding who is justified in carrying over old hens.

Competition for the consumer's dollar for food makes it extremely important that we produce good eggs and produce them more economically. As egg production per hen is stepped up, the cost per dozen to produce generally goes down.

**Depend on
All Pullet
Flock**

8,000 BIRDS ON FUL-O-PEP "We have fed Ful-O-Pep Chick Starter and Growing Mash for several years exclusively. We are more than pleased with the way our birds handle at housing time. This year, despite the rainy cloudy season, our birds not only came up to our usual expectations but exceeded them. Last year we fed Ful-O-Pep Egg-Breeder Mash to 2,000 breeders. This year there are 8,000 birds on Ful-O-Pep." J. J. Warren, North Brookfield, Massachusetts.

**Increased
Production
Reduces Cost**

There is very little difference in the cost of feeding hens that lay 100 eggs and hens that lay 200 or 300 eggs per year. It takes practically the same housing, overhead, management, labor and feed to take care of the one as it does to take care of the other. Obviously, the sure way of decreasing production costs is to constantly strive to breed, feed and manage for higher egg production.

Needless to say, the average egg production should be based on the number of pullets housed, and not on the average pullets left in the house at the end of the month or year. Doing a good culling job and adding up the averages may make the figures look good on paper but doesn't pay off well at the bank.

We believe the nutrition of the chicks the first six weeks of their lives is by far the most important factor in their proper development. It probably has more influence on the egg production of the birds when they mature than the nutrition for any similar period during the growing time.

**Early
Nutrition
Important**

It is during the first six weeks that many characteristics are fixed. For example, the kind of frame and quality of bone grown at this time have a tremendous effect on the size and activity of the pullets when fully grown. A lack of vitamin intake, inadequate organic salts, or excessive minerals may readily affect the shape of a chicken's bones. X-ray studies of bones of chicks only a few weeks old show a marked difference in the bone structure when the chicks are raised on a ration high in oatmeal as compared to a ration high in corn.

Since the red corpuscles are formed in the marrow of the bone and since they are the primary guardians of the health of the birds, it is extremely important that we produce good, sound bones during those early weeks of brooding. Good health means higher egg production and better livability when the pullets go into the laying house.

**Ful-O-Pep
Produces
Results**

We do not believe it to be happenstance that well over fifty per cent of the world's records among the popular breeds are held by Ful-O-Pep raised birds. Nor do we believe it to be accidental that for the past six years Ful-O-Pep raised birds have averaged better than fourteen more eggs per bird over all other birds raised on various feeds in the Contests.

When you combine the fact of high egg production with the extremely low rearing cost on Ful-O-Pep Feeds and the Ful-O-Pep Save-on-Feed Plan, you see why it's such a winning combination. This is true not only in the egg laying contests but in the bank or pocketbook as well.

We do not know of any other recommended method of raising pullets that suggests restricting mash and feeding as little feed as we recommend. A great many poultrymen have reported to us a saving of 50¢ to 75¢ per pullet as compared with other feeds and other feeding systems. At the same time these same poultrymen have reported growing better birds that would stand up and take it better.

**Ful-O-Pep
Save-on-Feed
Economical**

In recommending the restricting of feed as outlined in this book, we do it not merely because it's economical, but because we believe that you can raise a far better pullet, one that is freer from parasites and bigger and stronger than you can on any system of keeping mash before them all the time. By following the Ful-O-Pep system you give your pullets the opportunity to fully mature before they lay their first egg.

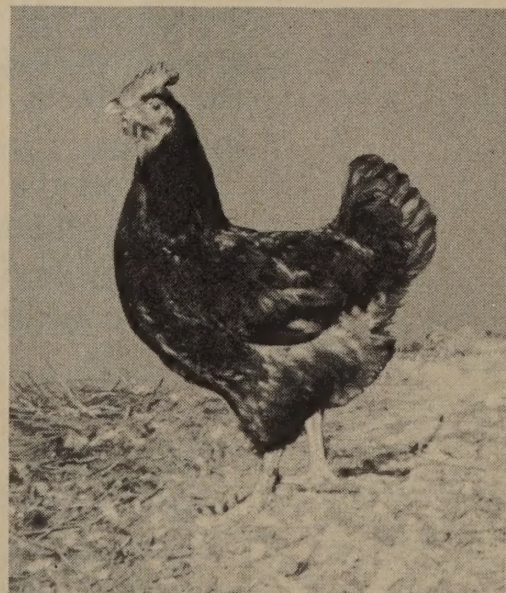
One of the worst practices that developed in the poultry industry some time back was the tendency to put a premium on pullets that laid their first egg early in life. Not only did they lay peewee eggs but they didn't live well. Quite commonly after being in production for a month they would go into a pause and frequently into a partial or complete molt.

It takes time to grow a bird that is capable of producing a 2-ounce egg or better practically every day of the year. We know of no evidence that would indicate that the good pullets are the ones which come into production at four to five months of age. Furthermore, you may save up to 50% in feed costs following the Ful-O-Pep Save-on-Feed Plan as compared with the usual recommended practice of keeping feed in front of the growing pullets on range.

**Grow Birds
That Live
and Lay**

There is overwhelming evidence that you may not only save feed with Ful-O-Pep vitamin-rich feeds and the Ful-O-Pep Save-on-Feed Plan but that this combination will help you raise the kind of pullets that will live and lay lots of choice big eggs. Moreover this combination will help build up your flock over a period of years to higher production and greater livability.

WINS AT PASSAIC "We have fed one flock of our pedigree Reds Ful-O-Pep Poultry Feeds and had very good results. We find that chicks fed on good feed and grown with the restricted feeding method mature to be large strong birds, which lay large eggs early in their producing period." E. B. Parmenter, Franklin, Massachusetts.





High Pen at the Georgia Contest, Owned by T. N. Wilcox.

A Record Year

THE poultry industry made a most outstanding record, exceeding all previous years by a handsome margin, in the laying year that began in the fall of '44 and was completed in the fall of 1945. During this period the egg production per hen was the highest ever recorded in the United States, and we believe when the final figures for mortality are obtained, they will be the lowest in recent years. It is fair to say that the accumulative effect of good feeding, good breeding, and good management are continuing to make their effects known by the constant improvement in the industry.

**New High
In Egg
Production**

Just as the poultrymen of America with their shortages of feed and labor have set new records, so have the state supervised egg laying contests for 1944-45. While egg production for all contests was only half an egg better per hen than the

GIVES CREDIT TO FUL-O-PEP "My pen of Barred Rocks won the Georgia Egg Laying Test. These birds were grown out on Ful-O-Pep Feeds, and you may be sure I give a great deal of credit to the feed. I have used Ful-O-Pep Feeds and the feeding plan for many years with excellent results." T. N. Wilcox, Tryon, North Carolina.



All-Time High Pen for the Pennsylvania Contest. Foreman Poultry Farm.

previous year, the mortality rate dropped to 16.5% as compared with 17.7% in 1943-44.

Ful-O-Pep raised birds likewise continue to set many new records. The 357 Ful-O-Pep raised pens averaged the equivalent of 217.23 two-ounce eggs with a livability of 85.15%, while the 602 other pens raised on various other feeds averaged the equivalent of 201.95 two-ounce eggs, and a livability of 82.5%. The Ful-O-Pep raised birds laid the equivalent of $15\frac{1}{4}$ more two-ounce eggs per bird and had a 2.65% better livability.

**Ful-O-Pep
Fed Birds
Top List**

For the past six years there have been 1,888 pens or 24,544 birds entered in the various contests raised on Ful-O-Pep. They have averaged the equivalent of 207.96 two-ounce eggs.

FUL-O-PEP BIRDS MAKE NEW RECORDS "The 1945 egg laying contests are now history and I am pleased to report that our Ful-O-Pep raised pullets established many new records. In winning the American Poultry Journal Supreme Achievement Trophy for the five highest producing pens entered by any breeder, Foreman Strain Leghorns established a new world's record for aggregate egg production. In so doing one pen established a new all-time record for Pennsylvania Laying Test and two others won top honors at Passaic and Oklahoma. The credit for this fine production achievement we are happy to share with The Quaker Oats Company. Your restricted feeding program combined with well-balanced feeds is conducive to a sound healthy growth. Such outstanding records are a true barometer of a sound feeding and breeding program." E. C. Foreman, Foreman Poultry Farm, Lowell, Michigan.

**Ful-O-Pep
Outlaid
Other Birds**

For the same period there have been 4,753 pens or 61,789 hens entered raised on various other feeds. They have averaged the equivalent of 193.30 two-ounce eggs. This makes a difference of $14\frac{2}{3}$ more two-ounce eggs per bird in favor of the Ful-O-Pep raised birds. When we stop to consider the number of birds involved, we believe no one will question the significance of the difference. This difference has been getting greater each year for the past six years.

Among the breeders who entered five or more pens in the contests we find that seven out of the top ten from an average egg production standpoint were breeders who raised their contest birds the Ful-O-Pep Way. Likewise, seven out of the top ten breeders with the highest livability for five or more pens were feeding Ful-O-Pep Feeds in raising their birds.

Harco Orchards of South Easton, Massachusetts established a new high record for all pens entered by one breeder. There were ten pens or 130 birds which averaged 270.26 two-ounce eggs per bird.

**Ful-O-Pep
Birds Make
New Records**

A number of other outstanding records were made in the contests this past year by Ful-O-Pep raised birds. The Foreman Poultry Farm, Lowell, Michigan made a new record for the five highest pens entered by one breeder. Mr. Foreman as a result received The American Poultry Journal achievement trophy. Foreman's pen of White Leghorns also established a new record for the Pennsylvania contest. The pen of Dixie Poultry Yards of Chapman, Alabama set a new record for the Florida contest.

In the fourteen standard National Egg Laying Contests that finished in September, eight of the winning pens and nine of the winning hens were Ful-O-Pep raised birds. In the six contests where we didn't have top pen, we had second high pen in two, third high in three, and sixth high in one.

**More Than
Just the
Top Pens**

While in the Arizona contest the top pen wasn't raised on Ful-O-Pep, eight out of the ten top pens and nine out of the ten top hens were Ful-O-Pep raised. At the Georgia contest the top nine pens and ten top hens were raised the Ful-O-Pep Way. At the Maine contest again you find eight out of the top ten pens Ful-O-Pep raised birds. In fact, you will find a number of Ful-O-Pep raised birds among the top ten in most every one of the contests.

Certainly these amazing records are proof that the Ful-O-Pep feeding plan raises the kind of birds that stand up under the strain of heavy laying.



Dale's Poultry Farm, Lockport, Illinois Can Be Proud of This Flock.

Simple Rules in Brooding

BROODING chicks is one of the most pleasant tasks there is in spring on a poultry farm. There are three important don'ts that must be carefully watched. Don't cook them, don't crowd them, and don't feed too much.

Probably more damage is done to chicks by having the temperature of the brooder too high than by any other one mistake in brooding. The brooder temperature should be kept as cool as possible and still have the chicks comfortable. When chicks are held in a brooder with temperatures that are too high, they do not properly assimilate the calcium nor grow sound bones. It is exceedingly important that the bones grow properly during the first few weeks of a chick's life.

It is highly desirable that the temperature in the brooder

**Temperature
Important
in Brooder**

FUL-O-PEP SAVES TIME & WORRY "Here at my farm of bred-to-lay S.C. White Leghorns 2,500 to 3,000 chicks are started in colony houses each spring. Up to five years ago I used my own ready mixed Starter. Since feeding Ful-O-Pep Chick Starter much time and worry are saved. Livability has been high and cannibalism low. It is a great satisfaction when you know that your chicks will live and grow into big, husky cockerels, and smooth, well-developed pullets for the laying house in the fall." Chas. E. Dale, Dale's Poultry Farm, Lockport, Illinois.

be relatively constant, and that the chicks always have a warm spot to go to. If they have a chance to choose their own temperature they are normally all right just as long as the temperatures they have to choose are not too high. We are then going to get the maximum assimilation of food, the best feathering, and generally the most rapid growth.

**Drop the
Temperature
1° per Day**

The temperature under the brooder stove hover should be approximately 90° for the first few days, and then dropped approximately a degree a day, so that it is down to about 70° by the time the chicks are three weeks old, assuming that outdoor temperature will permit. One of the reasons why it is so much harder to raise chicks in hot weather is because of the difficulty in reducing the heat as just suggested.

There should be a ring of either metal, cardboard or chicken netting covered with sacks around the brooder to prevent floor drafts and to keep the chicks near the source of heat. It avoids their piling up in some corner and getting chilled. Just as soon as the chicks really know where to go to get warm, and know enough to run back and forth, the ring should be taken down and the chicks allowed to run into the colder parts of the brooder house. We would say at the end of the first week they should be given the run of the brooder room.

**At the Start
Keep Chicks
Near Heat**

Unfortunately, many poultrymen are inclined to measure the size of their brooder house by the number of day old chicks they can crowd under the brooder stove. Then when the birds are two or three weeks old, they no longer can spread out around the source of heat without crowding one another.

The chicks must have an opportunity to spread out in a ring around the source of heat so they can all get the approximate temperature that they need, as well as ample ventilation to be comfortable. Overcrowding means poor ventilation, wet houses, inactive chicks, and frequently constipated chicks. So remember there is no great saving in labor and there is a real loss of money in trying to raise two chicks where only one should be grown. Let's use good common sense and don't try to raise more chicks in a house than you know can be properly accommodated and cared for in that brooder.

**Don't
Crowd
Them**

Chicks should not be fed so much that they are inactive. Watch their tails, for when they are down it's a warning that you may be overheating or overcrowding, or just plain over-feeding. Whenever you see the tails down and the chicks rather listless, take the feed away for several hours and let



This Fine Flock of Pullets Owned by Harwood Poultry Farms, Memphis, Tennessee.

them get good and hungry. It is amazing how quickly and how successfully this seems to straighten out the chicks.

Ful-O-Pep Chick Starter contains enough bulk and is laxative enough in action that under ordinary circumstances the chicks rarely ever show signs of constipation. Should you overheat or overcrowd them and in turn get them in a constipated condition don't hesitate to pick up the feed for as much as a day. They won't starve to death.

When chicks have become constipated some poultrymen like to give the chicks a flush by mixing 75% bran and 25% molasses and feed it for a day, or put the molasses in the drinking water at the rate of 1 pint to 32 pints of water. We find that usually the most effective way to handle the flock is simply taking the feed away until the chicks show signs of being good and hungry.

**Use a
Molasses
Flush**

When the chicks are put in the brooder house we suggest covering the litter on the floor with either cotton sacks or

9 YEARS ON FUL-O-PEP "Nine years ago we tried Ful-O-Pep Feeds and have been using them exclusively ever since. We find Ful-O-Pep Feeds unexcelled in producing pullets capable of making exceptionally high average production records at the lowest feed cost per bird. Our official U. S. R.O.P. flock average of 260 eggs per bird and individual R.O.P. birds laying as high as 346 eggs are the direct result of Harwood breeding and the Ful-O-Pep plan of raising profitable pullets." J. M. Harwood, Harwood Poultry Farms, Memphis, Tennessee.

paper so they won't eat the litter. It simplifies teaching them the difference between feed and litter. After three or four days the litter may be uncovered.

**Choose
Proper
Litter**

We consider that the type of litter used for baby chicks is very important. Chicks will eat approximately 10% of their total feed intake in the form of litter regardless of whether it is sand, shavings, straw or oat hulls. Thus the problem becomes: Do we want the chicks to eat oat hulls, shavings, straw, sand, feathers, or some other floor covering?

Of the different types of litter commonly used in brooder houses, oat hulls is the only one relatively rich in feed value for baby chicks. Chicks may safely eat it and thereby add to their ration a most desirable form of fiber as well as essential food nutrients. Furthermore, oat hulls practically refuse to burn so they are one of the most fireproof materials used as litter.

**Get Chicks
Outdoors at
an Early Age**

Get the chicks outdoors at an early age. The sooner they get out on the ground and in the colder air, the safer they are and the stronger and healthier they grow. Build a windbreak and sweep the snow away if necessary to let them out.

Chicks that are allowed to run outdoors by the time they are ten days to two weeks old don't venture far before they get chilly and consequently know their way back into the house. They just don't have to be taught or even watched. When chicks are not allowed to run outdoors until they are six or seven weeks old, they may go too far and not know the way back to the house so that they get chilled. As a result they crowd in some corner and get into trouble.

It is desirable to have the chicks out on the ground even if there isn't any grass available. In most of the northern states early hatched chicks won't get any grass but even so they will do better out on the ground and out in the cooler air than when confined to the house.

**Provide
a Night
Light**

A small night light (7 watt bulb) should hang low over the brooder or under the hover in the brooder house so the chicks can find the brooder. With a dark brooder they are quite apt to pile up in a corner and get into trouble. It also avoids the job of having to push the chicks over to the heat each night after the sun goes down so saves a lot of labor.

The birds should have an opportunity to roost at a fairly early age. That gets them up off the floor, gets them away from crowding and piling, and means the heat may be taken away from them at an early age.

Low sloping roosts along the rear or side walls encourage the chicks to climb up on them during the daytime and before you know it they'll be roosting on them at night. As soon as they get to roosting they tend to spread out, feather more rapidly, and are generally plumper and better breasted. We are not suggesting that you force the chicks to roost but rather give them the opportunity when they are ready.

**Provide
Plenty of
Feeders**

Be sure to provide plenty of feeding space and have low feeders on the floor. Even if the chicks do scratch litter in the troughs, they do not have to eat it unless they want to. Baby chicks need approximately one 3-foot feeder for each 100 chicks. That we would say was the minimum amount. As the chicks get older it is desirable to increase this amount of feeding space as needed. When all the chicks have an ample opportunity to eat when they want to, there isn't the fighting and pushing, and the whole flock grows more uniformly.

After the chicks are six to eight weeks old and running out on range, it is desirable to get them outdoors at daybreak. In doing so you get away from possible brooder house vices and they seem to range better. Assuming that you are not bothered by two-legged or four-legged pests, we would suggest leaving the brooder house door open so they can go out just as soon as they get up in the morning. Where it is necessary to protect them from vermin or thieves, either set the alarm clock and get up at daybreak to let them out, or fix an exit which the birds will trip themselves when they want to go out in the morning.

**Get Chicks
Outdoors at
Daybreak**

Also remember as the chicks get older they take more space and in turn give off more heat so need more room and more ventilation. We all appreciate that the finest pullets come out of the trees in the fall. It usually isn't practical to put all the pullets up in the trees but it will pay to have more houses or shelters for them. One of the reasons that range shelters have been so popular is that they provide much better ventilation.

**Growing
Birds Need
More Room**

Let's keep in mind that pullets raised under proper conditions are one of the principal steps toward a profitable laying flock. There is a lot more money to be made in raising a moderate number of good, strong, healthy pullets than there is in filling the house beyond capacity and raising an uneven flock of second grade pullets. Decide now to raise the finest lot of pullets you have ever raised.

Feeding Value of Oats

WE believe that the basic outstanding value of Ful-O-Pep Chick Starter and Ful-O-Pep Growing Mash is that they contain more oatmeal than is found in other starters and growing mashes on the market.

**Oats Best
Single
Grain**

Back in 1928 and '29 many believed that other grains were better than oats or oatmeal for growing chicks. We set up a series of tests at the Ful-O-Pep Research Farm which proved conclusively to our satisfaction the superiority of oats. Experiment stations have since proved time and again that oats or oatmeal is the best single grain for chicks.

A higher percentage of oatmeal may safely be fed in the chick ration than any other grain. Oats is our best grain source for thiamin, which aids in the digestion of carbohydrates. A deficiency of this vitamin leads to constipation. Oats also is a good source of other members of the vitamin B complex such as riboflavin, pantothenic acid and choline.

**Oats Good
Source for
Manganese**

Oats is the best grain source for manganese, which is needed for sound bone growth, the same as calcium and phosphorus. Good bones are essential to good blood, and both are necessary for good health.

Excessive feeding of corn has been found responsible for necro in hogs, black tongue in dogs, pellagra in humans, and slipped tendons in chicks. When wheat is fed to excess to dogs it tends to produce running fits. We do not yet know what the equivalent reaction is on chickens. For some reason it isn't possible to feed anywhere near as large a proportion of barley, corn or wheat as oats.

**At 3 Weeks
Begin to
Feed Oats**

In addition to the liberal oatmeal content in Ful-O-Pep Chick Starter, we recommend the feeding of whole oats, beginning at three weeks, to provide the chicks with the extra amount of bulk they need for good elimination. By the time the pullets are ten weeks old, they should be eating twice as much oats as they do of Ful-O-Pep Growing Mash.

Don't injure your birds or waste money by feeding excessive amounts of mash to pullets grown out on range. We are confident you will find that the restricted feeding program as outlined in this book, together with the liberal feeding of oats and oatmeal, will grow big, rugged, sound pullets, capable of laying lots of big, choice market eggs.



High Pen for the Maine Contest, Owned by Harco Orchards

Concentrated Spring Range *

GRASS is Nature's complete food for most animals. It is the only food on which animals may grow for generation after generation into fine big individuals with only the addition of sunshine and water.

When grasses are grown on fertile soil and cut at the proper stage of growth many of the valuable vitamin benefits in them may be preserved for year around use. By their addition in the form of Concentrated Spring Range to Ful-O-Pep Mashers, we provide chicks with a finest combination of food nutrients, and feel sure you will like the results they produce.

**High in
Vitamin
Values**

*Trade-mark registered U.S. Patent Office.

FINDS QUALITY FEED ESSENTIAL "The 1944-45 contest season has just ended. Pens entered from Harco Orchards continue to make excellent records. Our hen at the Western New York Contest was high hen all breeds for all contests (345 eggs—376.30 points). This bird laid 228 successive days—an outstanding performance. All our early replacement pullets and breeding males are grown under the Ful-O-Pep Restricted Feeding Program. Quality feed is essential to a good breeding program. Good breeding, feeding, and environment, plus common sense will equal profits in the postwar period." H. A. Richards, The Harco Orchards and Poultry Farms, South Easton, Massachusetts.

WORLD'S EGG-LAYING CHAMPIONS



World's Record Leghorn, Tallieson Contest, 343 Eggs—
376.25 points, W. A. Seidel, San Antonio, Tex.

RAISED ON

FULFILL-O-PEEP

FEEDS



World's Record New Hampshire, New York Contest, 339 Eggs—
371 points, Irving J. Kauder, New Paltz, N. Y.



World's Record for Barred Plymouth Rocks and for Heavy Breeds, Georgia Contest, 3943 Eggs—422.95 points, T. N. Wilcox, Tryon, N. C.



World's Record for Rhode Island Reds, Pennsylvania Contest, 3836 Eggs—4089.70 points, Crooks Farm, North Brookfield, Mass.



World's Two Year Record Pennsylvania Contest, 6610 Eggs—
6929.10 points, Beech Farms and Hutchby, Clinton, Missouri.



World's Record for New Hampshire, Pensacola Contest, 3813 Eggs—
3943.35 points, Geo. A. Peares, Whitehouse Station, N. J.



Five Week Old Pullets Started on Ful-O-Pep. Anderson Hatchery, Ogden, Utah.

The Ful-O-Pep Feeding Plan

THE Ful-O-Pep Plan of Feeding is designed to grow large sized, firm-bodied, sound-boned, healthy pullets that will live and lay lots of big eggs. We do not believe in or recommend feeding heavily of a high protein mash which will mature pullets in three or four months' time. We know that this means lower vitality, shorter life, and smaller birds.

**Feed the
Chicks on
Arrival**

Have the feed ready in hoppers, trays, or flats when the chicks are put in the brooder. For the first two days they should be fed mostly on Ful-O-Pep Fine Chick Feed plus fine granite grit and charcoal. These may be sprinkled over the Ful-O-Pep Chick Starter. Chick Feed has an eye appeal for baby chicks so that they will eat it readily. There is also less tendency for the chicks to paste up when started on Chick Feed.

2% MORTALITY ON FUL-O-PEP "We started a flock of 3,000 Leghorn chicks. Up to the end of five weeks our loss was only 2%, or 60 chicks. We attribute the splendid results and low mortality to Ful-O-Pep Chick Starter. We might tell you that the baby chicks feathered out nicely. There was no feather picking, toe picking, or pasting up on the part of the flock. We highly recommend Ful-O-Pep Feeds as our results this year have been better than in any previous years." Guy B. Anderson, Anderson Hatchery, Ogden, Utah.

After the first two days, keep Ful-O-Pep Chick Starter in front of the chicks all the time and feed Ful-O-Pep Fine Chick Feed at night. Be sure to provide plenty of hopper space, flats, or trays, so all the chicks can eat. Have fresh, lukewarm water available where the chicks can easily find it. Cold water may severely injure the chicks.

Supply
Grit and
Charcoal

Sprinkle some fine granite grit, or even coarse, sharp sand and charcoal on top of the Ful-O-Pep Chick Starter each day as you fill the hoppers. Feed Ful-O-Pep Fine Chick Feed at night on top of the mash until the chicks are three weeks old. Then it is time to change to Ful-O-Pep Coarse Chick Feed for chicks prefer coarse material. Feed the Coarse Chick Feed in the litter or else on the ground at night.

It is generally best to begin feeding whole oats by the time the chicks are three weeks old. The oats should be smooth oats so that the birds can eat them readily. Heavy, thick hulled oats with long awns or barbs are difficult for young chicks to eat since they stick in their throats. Small, thin hulled, or clipped oats are excellent for young chicks.

Increase
Size of
Grit Used

The type of grit that is used in growing chicks is extremely important. Be sure to use acid-insoluble granite grit. Use the fine granite grit for the first three weeks, medium granite grit until the chicks are six weeks old, and then change to hen size granite grit and continue to feed it the rest of their lives.

Birds cannot handle oats or other fibrous material properly without having coarse grit. Actually when grain and grit are fed, the chicks soon develop a large, strong, hard muscular gizzard. That means that they can handle lots of grass as well as the oat hull fibers.

Granite grit does not destroy the acid in the chick's gizzard and will grind up any litter or other fibrous material that the chick eats. We believe that from the standpoint of the health of the growing chick it is particularly important that the acid of the gizzard should not be destroyed by feeding any lime products. The more lime that is fed the lower the degree of acid in the gizzard.

Increase
Amount of
Grain Fed

When the birds are running out on range it is desirable to feed the grain on the ground rather than attempt to throw it in the litter in the colony house. When birds are six weeks old change from Ful-O-Pep Coarse Chick Feed to Ful-O-Pep Scratch Grains. The amount of grain to give will vary from day to day depending upon the weather. In hot weather the birds will not eat as much grain as in cold weather. That is

why we make the suggestion that you feed as much grain as they will clean up in approximately ten minutes.

**At 6 Weeks
Change to
Growing Mash**

Change from Ful-O-Pep Chick Starter to Ful-O-Pep Growing Mash when chicks are six weeks old. By the time they are eight weeks old, begin to restrict the feed so that by the time they are ten weeks old you are feeding only as much Ful-O-Pep Growing Mash and oats in the morning as they will clean up in one to two hours. Feed as much Ful-O-Pep Scratch Grains as they will clean up in ten minutes at night.

**You Feed
Less Mash
Than Grain**

On two days of the week, let us say Wednesday and Sunday, feed nothing all day except as much oats as they will clean up in ten minutes. This should be fed late in the afternoon. By the time the pullets are ten to twelve weeks old, and by restricting feed in this way, they should be eating at least two or three times as much grain, that is, a combination of whole oats and Scratch Grains, as they are Ful-O-Pep Growing Mash. Actually they should be eating about half as much total feed as if they had feed in front of them all the time. This restricting of feed makes it possible to regulate the maturity of the birds, it promotes the development of larger sized birds, and longer life, and consequently improves egg size.

Do not put any disinfectant in the drinking water at any time. You cannot disinfect a chicken's insides. The birds object to some disinfectants and consequently do not drink enough water. Because they do not drink enough water, they are frequently constipated. It is quite all right to disinfect the drinking fountains, but do not put the disinfectant in the water. In hot weather it is particularly important that the water be in the shade fairly near the feed.

**Super Greens
High in
Vitamins**

In case of any trouble from colds, chicken pox, or round worms, or if your pullets do not have adequate shank color, feed Ful-O-Pep Super Greens either in meal or pellet form. It may be used as the chick starter or growing mash, or may be fed as pellets as soon as the birds are able to handle the pellets. Since it is made in a small size as well as the regular hen size pellets, that means it may be fed at an early age. Do not hopper feed Ful-O-Pep Super Greens Pellets alone. Be sure to feed mash as well. When feeding pellets spread them out so that all the pullets are able to get some.

It is important with the restricted feeding plan we have outlined that ample feeding space be given. All the pullets should have a fair chance to get mash and oats in the hour or two in the morning while the feed is kept in front of them. We



All-Time High Pen for the Florida Test. Dixie Poultry Yards.

would suggest that you throw the oats on the ground and use your hopper space entirely for mash feeding.

A month before the pullets are housed or when they are approximately six months old and you want to get them into production, put the birds on full feed. Give them all the mash that they will eat all day long, give them a liberal feeding of oats in the morning and a light feeding of Ful-O-Pep Scratch Grains at night. This should work out to be approximately 40% of oats, 40% of Ful-O-Pep Growing Mash or Ful-O-Pep Egg-Breeder Mash, and 20% of Ful-O-Pep Scratch Grains. Do not overfeed on Scratch Grains as this is so frequently the cause of pullet losses due to blowouts, shell-less eggs, blue comb, and other pullet troubles.

**Putting the
Pullets on
Full Feed**

LIKES FUL-O-PEP VERY MUCH

"In winning the Florida Egg Laying Test this year our pen of White Leghorns finished over 200 points ahead of the runner-up and established a new all-time record for that Test. Their record was 3,861 eggs for 4003.30 points. Also our high hen with 344 eggs and 371.35 points was high Leghorn in all U. S. Laying Tests. These birds were raised on Ful-O-Pep Feeds as were most all our other pullets that are finishing their year with some excellent R.O.P. records. Your feeds have been consistently uniform during this shortage, and we like them very much. We have six pens entered again this year and 500 pullets in R.O.P. at home. They are starting off nicely, large body and egg size, and show excellent health and stamina. They were fed your feed from day old." C. V. Shell, Dixie Poultry Yards, Chapman, Alabama.



R.O.P. Candidates Raised the Ful-O-Pep Way by Anton Mazanec, Waco, Texas.

Restricting the Feed

WE adopted the Ful-O-Pep Save-on-Feed Plan in raising pullets in 1937. In the last six years well over half of the winning pens and hens in the Egg Laying Contests have been birds raised on Ful-O-Pep Feeds. Nearly all of the world records among the popular breeds are held by birds raised on a restricted feeding program.

**Ful-O-Pep
Way Raises
Champions**

We do not believe that further proof is necessary of the quality of pullets this system raises. As a matter of fact, restricted feeding with pullets on range is as old as the hills; it's just new to the modern poultry industry. Our grandfathers and grandmothers raised pullets that way, and they raised strong, healthy, vigorous pullets. It's true the pullets didn't begin to lay early, but they were big husky birds that laid big eggs and rarely was there much trouble with sickness.

RECOMMENDS FUL-O-PEP HIGHLY "We highly recommend Ful-O-Pep Chick Starter and Ful-O-Pep Growing Mash to our many customers. All of our 1944 breeding stock were raised on Ful-O-Pep Feeds to maturity with less than 2% mortality. Our R.O.P. Reds are known for their wonderful livability and laying qualities by their records in laying contests for the past eleven years." Anton Mazanec, Waco, Texas.

It's only in recent years that we have tried to crowd mash down the chickens' throats from the time they were hatched until they went into the laying house. Go out into the country some day and visit a farmer and see how much mash his pullets get after they are ten weeks old. You will find that the farmer feeds relatively little mash, and it is surprising how much less laying house mortality he has than when mash is kept before the growing birds out on range.

Let's Take a Lesson from the Farmer

We recognize that the pullets on a farm do have the advantage of lots of grass and the manure pile, which is rich in vitamins. You can't grow pullets on a bare lot without feeding a fair amount of mash with the grain, but where there is a grass range, and especially if there is a handy manure pile for the pullets to work over, they do extremely well with very little mash after they are eight to ten weeks old.

It has been rather clearly established on a good many animals that the rate of their maturity is an indication of their length of life. An animal usually lives from five to seven times as long as it takes it to mature.

Early Maturity Shortens Life

If we push our pullets into early production, say at four months, and accepting that they live five to seven times as long as it takes to reach maturity, it means that the average of them would be dead at 24 months of age. We have seen altogether too many cases of 50% of the pullets put in the hen house either culled or dead before the end of the first laying year.

In the early twenties the industry found they could step up the protein and speed up the growth of the chicken and in turn the rate of maturity. Before then it was relatively uncommon for a pullet to start laying before she was six to seven months old, but in the twenties poultrymen began to brag in their advertising about their pullets beginning to lay at four or five months, and then three and a half months. There were some that had pullets in production before they were a hundred days old. These pullets, for the most part, laid small eggs. Early maturity, small size eggs, and high mortality go rather closely hand in hand.

Maturity Rate Affects Egg Size

Some poultrymen insist that they cannot keep their pullets from coming into production until they are six to six and a half months old. They feel that restricting the feed and holding off maturity is all right for a slow developing strain of birds, but just isn't any good for a strain bred for high egg production. When a poultryman says he can't stop his pullets from

coming into production he is just admitting that he can't stop feeding his pullets too much mash and grain.

**Restrict the
Feed for
Cockerels**

One of the ways of telling whether the pullets are being fed too much is to watch the aggressiveness of the cockerels. If the cockerels don't fight, if they don't chase the pullets, and if their combs and wattles don't develop, you know then that you have been adequately restricting the feed. Since we have been restricting the feed at our Research Farm, we have found it entirely unnecessary to separate the cockerels from the pullets because the cockerels mature slowly and do not bother them. The cockerels develop normally, they grow big, and we have practically no mortality among them either on the range or in the laying house.

**Makes for
Friendly
Pullets**

It is amazing how much more friendly the pullets are, and for that matter the cockerels, when grown on this restricted feeding program. The birds soon learn to know where the feed comes from and who does the feeding. They just think that you are the best friend they have ever had.

You know what a great advantage there is in having a bunch of pullets that when moved into the laying house act as though they've been there all their lives. If your pullets are not friendly and easy to manage, it means they have not been properly fed or handled on the range.

Many poultrymen have wondered whether restricted feeding really meant a saving in feed cost. They felt that possibly the pullets ate just that much more feed after they were put on the full feed to make up the difference. We know from experience that a pullet will eat all that she can hold for several weeks before and for several weeks after she comes into production. With her capacity being limited, she doesn't begin to consume the amount of feed you have withheld from the age of two months and up to six months.

**Cuts the
Feed Cost
Materially**

For a period of four months you have saved practically half the feed normally consumed when feed is always available. We recommend that you feed approximately one-fourth mash, one-fourth scratch, and one-half oats during this period. When you compare the cost of this method of feeding with raising pullets on all mash, as many people recommend, you will normally find a reduction in feed cost of as much as 50% in raising pullets. Besides, by restricting the feed you normally will experience a sharply lower mortality on the range and in the laying house, plus eggs of better size as compared with keeping the mash and grain in front of the birds.

By restricting mash, and on two days a week just giving the birds a light feeding of oats, our experience is that you practically eliminate all troubles from tapeworms. While it may not eliminate them 100%, they do not seem to be able to establish themselves in sufficient numbers to become a problem. Even on farms or on a range where there has been a heavy infestation of tapeworms in previous years, they generally are not the least bit serious if you follow restricted feeding, plus the feeding of whole oats.

**Eliminates
Internal
Parasites**

When you restrict the feed, you naturally get the birds to eat more grass, besides giving them a chance to empty their intestines. This tends to increase the acidity in the gizzard and in the intestines which is not to the liking of the tapeworm. Also the bird is better able to handle the pigment material in the grass and feed she gets, and consequently you get better shank and eye color.

You undoubtedly have gone to the circus or visited the zoo and watched them feed the animals. We wonder if you realize that one day a week the animals are not fed. In most zoos they aren't fed on Monday because that's the day when they have the fewest visitors. You can be sure with animals that are worth thousands of dollars they don't cut out feeding one day a week to save money. They do it because they know it is good for the animals.

**Save Up to
50% in
Feed Costs**

You may save up to 50% in feed costs following the Ful-O-Pep rearing plan as compared with the usually recommended practice of keeping feed in front of the growing pullets on range. The Ful-O-Pep Save-on-Feed Plan not only may cut your feed costs as much as 50% but is vitally important in producing big, strong, long-lived pullets which practically lay full sized eggs right from the start.

So let's do the best job that we know how this year in raising the pullet crop, and do it with the least amount of feed.

HIGH HEN AT MAINE "We have raised all of our contest birds for several years on Ful-O-Pep Chick Starter and Growing Mash. The contest records show that we have made some especially fine records. We believe in order to raise the best possible birds we must first use all of our skill in order to breed the best possible, and they must then be raised on feed of a quality which is on a par with the breeding." G. B. Treadwell, Spencer, Massachusetts.





W. E. Pyles, Maysville, Kentucky Owns This Healthy Vigorous Flock.

Provide a Grass Range

THE finest pullets are raised outdoors on range. The better the range, the less other feed you need, and the greater economy in raising the pullets. So far no one has been able to reproduce for chickens raised in confinement what they obtain through contact with good old Mother Earth.

**Get Chicks
on the
Ground**

Whether it's a bare range or the finest grass range on which no chickens have run for years, or an old range which you have been using year after year, get the young stock out on the ground at an early age. The sooner pullets get on the ground the quicker they are out of trouble, and the sturdier and stronger they will grow.

FED FUL-O-PEP FOR 20 YEARS

"We are breeders of R.O.P. White Leghorns and have been using Ful-O-Pep Feeds continuously for the past twenty years. Our results for the 1945 season have been equally as good as for any previous year. It's quite a credit to The Quaker Oats Company to have been able to continue producing a superior product during war time. We have had considerable opportunity to observe the results poultrymen have with all kinds of feeds and feeding programs through our chick customers. Those who feed Ful-O-Pep never seem to be bothered with troubles resulting from feed deficiency of one kind or another." James L. Pyles, W. E. Pyles & Son, Maysville, Kentucky.

You can raise more unusually good feed for the pullets and do it cheaper on pasture than you can in any other way. True, it's possible to raise more tons of potatoes or corn than of grass per acre, but it won't begin to match the saving in labor of having the chickens go out and pick their own grass, bugs and worms, thus getting a large proportion of their vitamin, protein and mineral requirements.

The question is frequently asked as to how much range chickens need. That, frankly, is a hard question to answer, for so much depends upon the type of soil, rainfall and labor. On our Research Farm we have been raising in excess of 500 pullets to the acre, and are still able to keep the sod in relatively good condition. On a light sandy soil, you would need more land to provide greenstuff, and in particularly dry years the pullets would abuse the range badly.

By having 500 pullets to the acre and restricting feed, we don't need to cut the grass. The chickens keep it cropped short. If we were to provide twice as much area, or if we were to give the birds full feed, we no doubt would need to go in with a mower and cut the grass rather frequently.

We believe that where it's possible to have cattle and chickens on the same range, it results in still better range conditions. Provision, of course, would have to be made so the cattle don't eat all the feed and drink all the water supplied for the chickens. Clipping the grass, fertilizing the field and liming the land all contribute to growing better grass, more of it, and making better feed for the chickens.

Where it is practical, move the brooder houses to a different range in a three or four year rotation. This usually gives the chicks a range with a better sod and more greenstuff. Where this isn't possible, let them run on the same range year after year. We've seen too many poultrymen raise their pullets successfully for ten years or more on the same ground to worry much about it.

Fortunately, those poultrymen who do not have a good grass range still may get many of the benefits of a grass range in dehydrated cereal grasses used in all Ful-O-Pep Mashers. This material produces the bright yellow shanks that are typical of range raised pullets. We want to caution when raising birds on bare ground not to feed too much mash. Be sure that you allow the hoppers to run empty for a part of each day. Restricting the feed moderately when the birds are on bare ground is mighty important.

Number of
Birds to the
Acre Varies

Improve the
Quality of
the Range

Range
Benefits in
Ful-O-Pep



Close-up of a Few Pullets Raised by M. M. Sharratt, Oak Terrace, Minnesota.

Common Chick Troubles

THE poultry industry has made marvelous progress in reducing the losses in baby chicks or growing pullets. Many things that we once thought quite serious we now realize are of minor importance. Good breeding, good management, and good feeding have done much to eliminate trouble. We are giving here the common chick troubles that you may encounter, though we no longer think any of them are particularly serious.

BLUE COMB: For a number of years some poultrymen have had trouble with pullets becoming dark around the heads, which has generally been called blue comb. When the birds are cut open it is found the intestines are highly inflamed and the liver may also be affected. No one has ever been able to discover any organism that apparently is responsible for the condition. It has thus been classified as a nutritional deficiency. Blue comb is common where very large quantities of grain, especially corn, are fed to maturing pullets with the idea that the pullets should be fat when they are

MINIMUM LOSS ON FUL-O-PEP "We can heartily recommend your Ful-O-Pep Feeds and feeding program. We started 1000 chicks this spring and raised them with a minimum loss. Our birds are housed now, and we're receiving 5c per dozen premium over the market on the eggs. We continue to praise Ful-O-Pep and believe our small amount of trouble is due to your feeds and feeding program." M. M. Sharratt, Oak Terrace, Minnesota.

housed. We believe this idea is definitely wrong. The pullets should be in good flesh, but should not be fat when they go into the laying house.

Dr. Jungherr of Connecticut has recently discovered that the marked deficiency which the pullets are suffering from is a lack of potash, and the condition can be quickly stopped by putting a tablespoon of muriate of potash or potassium chloride in a gallon of the drinking water. That is probably easier than mixing 25% molasses and 75% bran. Apparently, the principal reason the molasses is effective is because it is a good source of potash. We do not believe that those who follow the Ful-O-Pep method of restricting feed and not feeding excessively of grain when their pullets are maturing will need to use the potash treatment to eliminate blue comb.

CANNIBALISM: Improper nutrition and improper management, with the accent on the nutrition, are responsible for cannibalism. Overheating and overcrowding may be responsible from a management standpoint, but if the feed and feeding are correct, the management may be quite bad before the chicks get into trouble.

Rations that are particularly rich in corn tend to bring about cannibalism, poor feather growth, and feather picking. If you will feed Ful-O-Pep Feeds, use Ful-O-Pep Litter, and follow the Ful-O-Pep Plan of Feeding, we do not believe you will have any trouble.

CHICKEN POX: In cases of chicken pox, the birds develop scabs or warts on their faces, combs, and frequently other parts of the body. Birds that are running on a good grass range rarely have much difficulty with chicken pox. It is only when the grass is tough, the ground is bare, or the birds are raised in confinement that the difficulty from chicken pox has been serious.

Many Ful-O-Pep feeders report extremely good success in combating chicken pox by feeding Ful-O-Pep Super Greens Pellets. They feel that chicken pox is not usually serious enough to justify vaccinating, and that a mild attack is generally less serious than the setback due to vaccinating.

HIGH HEN AT NEW YORK STATE "We are proud to advise we have received official information from the New York State Egg Laying Contest that Rusk White Leghorn hen No. 2-13 was the high hen of all breeds in this contest, laying 303 eggs for 333 points. At the Pennsylvania Egg Laying Contest Rusk White Leghorn hen No. 93-1 was the high White Leghorn hen in the two-year lifetime test. The birds mentioned above were raised to maturity on Ful-O-Pep Feed and the records speak for themselves. You will be interested to know that the livability and fast growth we have had on our R.O.P. central breeding farm has been excellent. We heartily recommend Ful-O-Pep Feeds." K. T. Anderson, Manager, Rusk Poultry Farm, Windsor, Missouri.



If you have an outbreak of chicken pox on the range or in the laying house, be sure you feed all the Ful-O-Pep Super Greens Pellets the birds will eat, and keep the grain rather restricted until the scabs are gone. We believe it will not hurt your birds seriously or cut down their production as long as you are getting a high vitamin intake with a heavy feeding of Ful-O-Pep Super Greens Pellets.

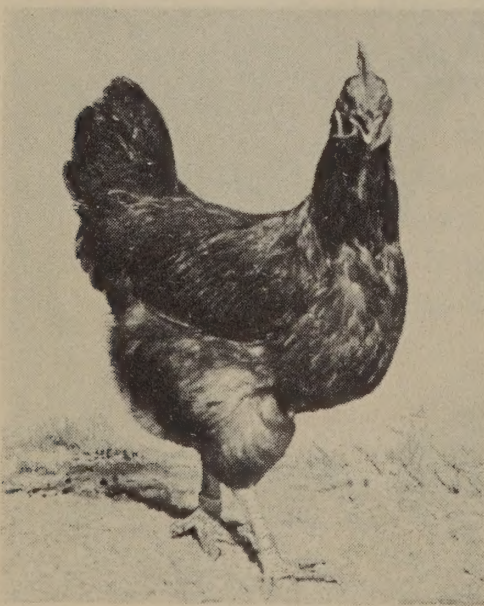
COCCIDIOSIS: As a means of preventing coccidiosis we recommend that you keep your litter dry in the brooder houses and that you feed charcoal as directed. Begin feeding charcoal to your baby chicks, using the fine granular charcoal; and then at three weeks, when you change to Coarse Chick Feed, begin using coarse charcoal. Feed charcoal at the rate of about 2 or 3% of their total feed intake.

If you find it is necessary to flush your birds because you haven't fed charcoal and acute coccidiosis develops, we would suggest that you use molasses at the rate of one pint of blackstrap molasses to 16 quarts of water, using that as the flush for one day. Or it may be easier for you to feed a mixture of 75% bran and 25% blackstrap molasses for a day.

COLDS AND BRONCHITIS: Young chicks may develop a case of sniffles or wheezing due to chilling in transit, or they may have a case of bronchitis. Keep the chicks fairly warm and keep the feed rather restricted. Hungry, active chicks stand a much better chance to pull through a case of bronchitis. Thoroughly disinfect the brooder house with formaldehyde before you allow a new lot of chicks to enter.

We make a very small size of Ful-O-Pep Super Greens Pellets that can be fed to baby chicks. Then as soon as the chicks are three weeks old they can go to the regular size of Super Greens Pellets. We have found Super Greens Pellets are of much value in combating colds and bronchitis, since the chicks are able to eat the pellets even though their nasal passages are stopped up so that they cannot readily eat mash.

CONSTIPATION: Most of the whitish discharge on the abdomen of a baby chick, which is commonly mistaken for diarrhea, is due to constipation. Constipation is primarily due to overheating, overcrowding, and overfeeding. Watch the chicks' appetites. If they do not



WINS AT ARIZONA "In the Arizona Contest we took first and second high hens. Not bad considering there were 572 birds in competition. It takes both good breeding and feeding to have birds go through a year's production in such fine shape. These pullets were raised on Ful-O-Pep Chick Starter and Growing Mash. The reserve they had built up carried them through in fine shape." Geo. G. Haws, Del Rio Hatchery, Mesa, Arizona.

show definite activity, if they are not really on their toes, take the feed away from them and let them go hungry for three or four hours at a time. Poultrymen have found that by flushing the chicks with blackstrap molasses at the rate of a pint to 16 quarts of water they avoid a great deal of the trouble from constipation.

GIZZARD ULCERS: When they are hatched many chicks have fairly well developed gizzard ulcers. This obviously then is traceable to the breeding stock. Breeding stock fed a ration high in corn seems to give the most trouble from the standpoint of having chicks hatched with gizzard ulcers. Oats seem to reduce the trouble.

Chicks or poults with gizzard ulcers do not seem to be able to assimilate vitamin D from oil. The change of the source of vitamin D in Ful-O-Pep Chick Starter and Ful-O-Pep Broiler Mash has meant a great deal in reducing the amount of trouble from gizzard ulcers. All chicks and all poults are able to assimilate the vitamin D from D-activated Animal Sterol.

We think that sand floors are by far the worst possible floors on which to grow chicks. They no doubt have cost poultrymen a great deal of money in chick losses due to irritation of the gizzard and intestines and thus inefficient feed consumption. A fibrous litter, such as oat hulls or straw, is especially desirable, because chicks that have ulcers are inclined to eat a good deal of the litter, regardless of what the litter may be.

RANGE PARALYSIS: The losses from range paralysis are dropping very sharply each year. That unquestionably is one of the big factors in lowering the mortality of the egg laying contests. Where breeders have carefully selected stock that showed resistance to range paralysis, they have been able to lower their losses sharply.

We believe that you will find that the Ful-O-Pep method of rearing, following the restricted feeding program and feeding liberally of oats and using lots of range, is a major factor, along with breeding, in eliminating range paralysis as a serious poultry problem.

WORMS: There are two types of worms that are common in growing chicks. Of these the tapeworm is much the easier to eliminate. If you will carefully follow the Ful-O-Pep restricted feeding program as outlined in this booklet, your tapeworm problem should not be the least bit serious. Don't feed any lime products or oyster shell during the growing period.

The number and size of roundworms apparently is largely affected by the quality of the proteins, the quantity of vitamins in the feed and the quality of the range. If you have had serious trouble from roundworms, or have a particularly bare range, use Ful-O-Pep Super Greens as your starter and growing mash. We are confident you will find that even on poor range the pullets are comparatively free from roundworms. Also be sure to follow the Ful-O-Pep Restricted Feeding Program.

WHERE FUL-O-PEP FEEDS ARE MADE



Akron, Ohio Mill



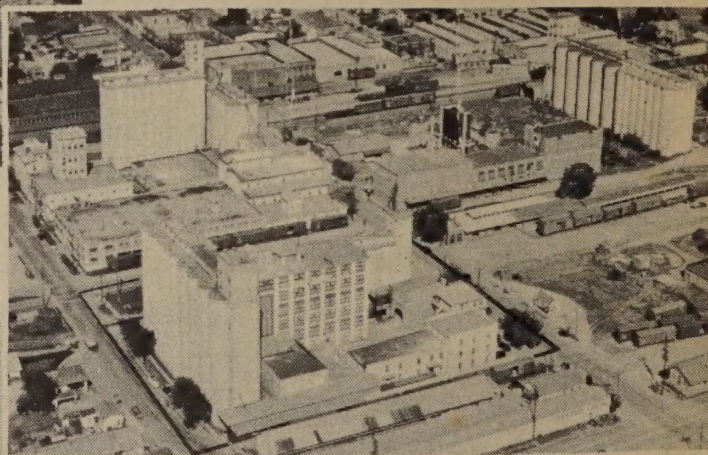
**Cedar Rapids,
Iowa Mill**



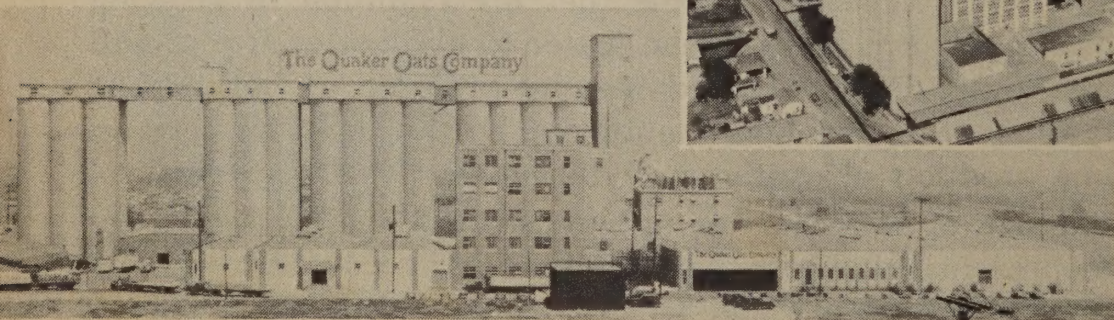
Memphis, Tennessee Mill



St. Joseph, Missouri Mill



**Sherman,
Texas Mill**



Los Angeles, California Mill

